

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of : **BOX PATENT APPLICATION**

Magalie ROY-AUBERGER et al. : Examiner: Unassigned

Serial No.: Unassigned : Group Art Unit: Unassigned

Filed: Herewith :

For: **PROCESS FOR SYNTHESISING HYDROCARBONS IN THE PRESENCE OF A CATALYST COMPRISING A GROUP VIII METAL SUPPORTED ON SILICA-ALUMINA**

**PRELIMINARY AMENDMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to examination, Applicants wish to amend the above-identified application as indicated below:

**IN THE CLAIMS:**

Please amend the claims as follows:

7. (Amended) A process according to claim 3, in which homogenisation is carried out by ultramilling in a colloidal mill.

8. (Amended) A process according to claim 1, in which the silica-alumina is calcined at a temperature in the range 700°C to 1200°C for at least 10 hours.

9. (Amended) A process according to claim 1, in which the silica-alumina is initially calcined at a temperature in the range of 350°C to 550°C for at least 1 hour, then at a temperature in the range of about 500°C to about 1200°C for at least 6 hours.

10. (Amended) A process according to claim 1, in which the silica-alumina is homogeneous on the micrometre scale.

11. (Amended) A process according to claim 1, in which the silica-alumina is homogeneous on the nanometre scale.

12. (Amended) A process according to claim 1, in which the amount of anionic and cationic impurities is less than 0.1% by weight.

13. (Amended) A process according to claim 1, in which the silica-alumina contains 0.5% to 30% by weight of silica with respect to the anhydrous product.

14. (Amended) A process according to claim 1, in which the group VIII metal content is in the range 0.1% to 50% by weight.

15. (Amended) A process according to claim 1, in which the group VIII metal is cobalt.

16. (Amended) A process according to claim 1, in which the catalyst contains at least one additional element selected from the group formed by: ruthenium, molybdenum, tantalum, platinum and palladium.

17. (Amended) A process according to claim 1, in which the catalyst further contains 0.1% to 5% by weight of at least one oxide  $M_2O_3$  of at least one metal M selected from the group formed by lanthanum, praseodymium and neodymium.

18. (Amended) A process according to claim 1, in which the catalyst is used in suspension in a liquid phase, in a three-phase reactor.

20. (Amended) A process according to claim 1, in which the catalyst is used in a fixed bed in the form of particles with an equivalent diameter in the range 2 to 10 mm.

**REMARKS**

A principal purpose of this Preliminary Amendment is to remove the multiply dependent claims and avoid the fee associated therewith, applicant reserving the right to reintroduce claims to canceled combined subject matter.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version With Markings To Show Changes Made**".

Respectfully submitted,



I. William Millen (Reg. No. 19,544)  
Attorney for Applicants

MILLEN, WHITE, ZELANO & BRANIGAN, P. C.  
2200 Clarendon Boulevard, Suite 1400  
Arlington, Virginia 22201  
(703)812-5325  
Internet address: millen@mwzb.com

**Filed: 2-15-02**

IWM(pdr)K:\PET\1987\prelim amend.wpd

## Version With Markings To Show Changes Made

### In the Claims

The claims have been amended as follows:

7. (Amended) A process according to ~~any one of claims 3 to 6~~ claim 3, in which homogenisation is carried out by ultramilling in a colloidal mill.
8. (Amended) A process according to ~~any one of claims 1 to 7~~ claim 1, in which the silica-alumina is calcined at a temperature in the range 700°C to 1200°C for at least 10 hours.
9. (Amended) A process according to ~~any one of claims 1 to 8~~ claim 1, in which the silica-alumina is initially calcined at a temperature in the range of 350°C to 550°C for at least 1 hour, then at a temperature in the range of about 500°C to about 1200°C for at least 6 hours.
10. (Amended) A process according to ~~any one of claims 1 to 9~~ claim 1, in which the silica-alumina is homogeneous on the micrometre scale.
11. (Amended) A process according to ~~any one of claims 1 to 10~~ claim 1, in which the silica-alumina is homogeneous on the nanometre scale.
12. (Amended) A process according to ~~any one of claims 1 to 11~~ claim 1, in which the amount of anionic and cationic impurities is less than 0.1% by weight.
13. (Amended) A process according to ~~any one of claims 1 to 12~~ claim 1, in which the silica-alumina contains 0.5% to 30% by weight of silica with respect to the anhydrous product.
14. (Amended) A process according to ~~any one of claims 1 to 13~~ claim 1, in which the group VIII metal content is in the range 0.1% to 50% by weight.
15. (Amended) A process according to ~~any one of claims 1 to 14~~ claim 1, in which the group VIII metal is cobalt.

16. (Amended) A process according to ~~any one of claims 1 to 15~~ claim 1, in which the catalyst contains at least one additional element selected from the group formed by: ruthenium, molybdenum, tantalum, platinum and palladium.

17. (Amended) A process according to ~~any one of claims 1 to 16~~ claim 1, in which the catalyst further contains 0.1% to 5% by weight of at least one oxide  $M_2O_3$  of at least one metal M selected from the group formed by lanthanum, praseodymium and neodymium.

18. (Amended) A process according to ~~any one of claims 1 to 17~~ claim 1, in which the catalyst is used in suspension in a liquid phase, in a three-phase reactor.

20. (Amended) A process according to ~~any one of claims 1 to 17~~ claim 1, in which the catalyst is used in a fixed bed in the form of particles with an equivalent diameter in the range 2 to 10 mm.